Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

OCT 6 1928

REPORT FOR WEEK ENDING OCTOBER 6, 1928.

HAVRE:

The past week was dry and rather windy. Station activities were confined mostly to finishing haying and digging root crops and potatoes.

Although there is but little moisture in stubble land, winter wheat seeded on fallow and corn ground is growing very well. There has been a little injury on the edges of some plots from grasshoppers.

Threshing in this part of the State is probably 80 per cent finished. There is not enough moisture for fall plowing, and very little of this will be done this fall.

Maximum temperature 81; minimum 29; precipitation 0.

JUDITH BASIN:

The weather was cool and cloudy the first of the week with rain and snow. The last of the week was clear and cool with considerable wind. Moisture retarded the threshing of late crops in the Basin.

Corn on the rotations has been harvested. Good yields were secured on fall plowing.

The cows have been taken off of the pastures, but the hogs still remain on the corn and barley plots.

Fall tillage work was continued and the plowing of the discontinued alfalfa plots was completed during the week.

Maximum temperature 67; minimum 30; precipitation .47 inch.

SHERIDAN:

Plowing of the rotation plots has been in progress throughout the week. The potatoes dug the last of the previous week were sorted and weighed, and husking the rotation corn is now in progress. Winter wheat was seeded in the rotations and the varieties the first of the week. The week has been generally fair, but somewhat cool and with one light shower.

Maximum temperature 79; minimum 31; precipitation .10 inch.

MANDAN:

Agronomy

Most of the week has been very nice fall weather. No field work has been done. Corn is not yet dry enough for shredding.

The rainfall for September was .89 of an inch, or .43 below the 50-year average. The total precipitation for the year to date is 16.43 inches, as compared with 14.87 for the 50-year period for this area.

Maximum temperature 84; minimum 36; precipitation 0.

Cooperative Grazing Experiment

The 30-acre steers were moved to the reserve pasture at the end of September, as they had run out of feed and showed a loss for the month.

Tho following gains were made in the various pastures during September, and for the season to the end of September.

Pasture	Acres per head	Gains per head. Lbs. Sept.	135 days.
100 acres	10	40.0	297.0
70 "	7	45.0	308.0
50 "	5	30.5	276.0
30 "	3	-33.5	170.0
Rotation. (70 acres)	5	68.9	275.4
Brome grass. (25 acres)	3.1	12.5	273.8 **
Sweet clover. *	.9	-11.0	286.0 **
Reserve. *	.9	- 5.8	.....

* On sweet clover for 15 days in September.
** For 120 days.

The brome-grass steers were turned into a small native grass reserve pasture the middle of September. During the last half of September they gained 46.3 pounds per head.

The steers in the rotation pasture made high gains during the month. They had been below normal on gains for the season up to this time.

If the weather continues good, the cattle should show some gain for the two weeks in October.

MANDAN, continued:

Horticulture

Vegetables in the acre and coulee gardens have been harvested and stored for the winter.

Small fruits are now being pruned, and cuttings made from grapes and currants.

The tree digger has been run under stock in the horticultural nursery, and the trees will be pulled next week.

Arboriculture

Trees for shipment next spring are being dug, counted, and tied in bundles. They are then being fumigated under the supervision of Mr. J. A. Munro, State Entomologist, after which they are heeled-in in rows for the winter.

ARDMORE:

The weather during the week was hot and dry with some short periods of high wind velocity.

The precipitation for the month of September was .30 inch; .87 inch below the fifteen-year average for the Station. Total precipitation for the 1928 growing season was 10.15 inches; 3.09 inches below the average.

Husking of the rotation corn plots was finished during the week. The yields per acre vary from ten to thirty bushels.

Sorgo variety test plots, rotation plots and plots 4 and 8 in Field 5 were hauled in and stacked.

All rotation fallow plots were cultivated with the duck-foot cultivator.

Maximum temperature 85; minimum 28; precipitation 0.

ARCHER:

The continued dry, warm weather gave opportunity to harvest corn. While the corn yields will not be large the crop is curing in a much better shape than last year. The harvesting of corn for silage and fodder has been completed. There is still some corn cut in the field which will be put in the silo. About 10 acres of corn remain to be snapped, and 16 acres to be harvested by the cows.

The dipping vat for the dairy cattle is nearing completion and it is planned to do the dipping in the near future.

Most of the trees have lost their leaves, giving the appearance of a finished season's work.

Director W. L. Quayle was a station visitor September 30.

Maximum temperature 79; minimum 33; precipitation Trace.

AKRON:

Another week has passed and none of the long needed rain to report.

The rate and spacing corn project was seeded to Turkey Red winter wheat early in the week. The October 1st seeding of the rate and date winter wheat experiment was made promptly on that date. The filling of the trench silo was completed and the ensilage sealed with straw and dirt. There was not sufficient corn by some three to five tons to completely fill the silo. The potatoes on the rate and spacing corn project were harvested. The south, or high ground plot, yielded at the rate of 530 pounds to the acre. The north, or low ground plot, yielded at the rate of 2260 pounds to the acre. The beans on the rate and spacing corn project were also threshed. The south, or high ground plot, yielded at the rate of 245 pounds to the acre while the north, or low ground plot, yielded at the rate of only 210 pounds to the acre. The harvesting of the forage and grain sorghums of the general forage variety experiment was started today. The leaves have all dried since the frost of last week and it will be necessary to harvest during the forenoons in order to save the forage. Only the very earliest grain sorghums matured grain and these almost if not wholly on fallow ground. In most instances the forage and grain sorghums did not even head on the small grain stubble ground

AKRON, continued:

Of the winter wheat seeded, only the August 15th seeding on fallow on the rate and date experiment is emerged. The September 1st seeding in this experiment on fallow has emerged spottedly. Probably there is something wrong with our method of fallow when the moisture will dry down seven to eight inches even during such a drought as we have experienced since July 20th. It is possible that the duck foot cultivator stirs the ground to too low a depth. Fallow land observed recently on a tour of Cheyenne and Kinball Counties, Nebraska, which had been cultivated with the rod weeder was moist within 2½ to 3 inches of the surface, and it was reported they had had no rains since the middle of August, nearly one month since the last consequential rains here.

Deputy State Entomologist in Charge of Rodent Control, W. L. Burnett, and Professor J. L. Hoerner, of the Entomology Department of the State Agricultural College, visited the station Monday afternoon in a tour of the northeastern counties investigating the extent and nature of the grasshopper infestation. County Agent, Jimmy Foster, and District Agent, R. H. Felts, visited the station Thursday forenoon. Superintendent O. R. Mathews, of the Ardmore station, visited the Station Friday forenoon. Eckley High School Science Class, in charge of instructor Walter Borg, visited the Station Friday afternoon. County Agent P. B. Miles, of Yuma County, visited the Station Saturday forenoon. Mr. Miles has only recently taken up his duties as County Agent in the County immediately east of the county in which this station is located.

Maximum temperature 88; minimum 38; precipitation 0.

GARDEN CITY:

High daily temperatures, for this time of the year, have been recorded for the past week. High wind velocity has also been recorded on several days of the week. These drying conditions have caused the firing of much of the row crop. However, they have added to the maturity of crops that under normal conditions might not have ripened before a killing frost was received.

Field work during the week consisted mostly of harvesting row crop plots that were ripe. Most of the milo on the dry land project is now in the shock. If drying conditions prevail throughout next week it is likely that kafir will be ready for harvest by the last of the week.

GARDEN CITY, continued:

The question as to whether to seed wheat or not to do so is uppermost in the minds of the farmers of this district. Some winter wheat has been seeded and a small portion of it has emerged, but most farmers are postponing seeding in hope that moisture will be received. The surface four or five inches of soil in most cases is dry. Some farmers who have seeded in a dry seedbed are reporting damage from the false wire worm. None of the rotation winter wheat has been seeded on the project. In the date of planting test, plots have been planted every ten days since the 20th of August, but none of the plants has emerged.

Maximum temperature 88; minimum 38; precipitation 0.

DALHART:

Another week of extreme dry weather has passed. Two days were unusually windy for this time of year. The days have been hot, followed by cool nights.

Harvesting has been in full swing all week. Crops are ripening rapidly now and harvesting will occupy the main program until it is finished.

The cotton is opening in good shape for a few varieties, but not enough is open to date to make the first picking. It is likely that a frost will catch the bulk of the cotton. If a frost should hold off just a little longer all crops excepting cotton will be out of danger. Nearly all sorghum crops are past frost danger now.

Selection of seed for planting has occupied some time this week. The seed, including corn, is nearly all stored at this writing. There are six varieties of forage and grain sorghums which have not matured sufficiently to select the seed.

The winter wheat and rye on plots B & D, early plowing and summer fallow, have germinated and emerged to a thin stand already. The other plots have not germinated yet.

A number of visitors came out and looked over the Station this week. Messrs. F. A. Wagner and De Allamand, of Garden City, Kansas, visited the Station the first of the week. Mr. J. R. Horton, Entomologist, of Wichita, Kansas, was here at the time the other Kansas men were visiting.

DALHART, continued:

Later in the week eleven men from Kansas and Missouri came out and made a tour of the station. These men are all farmers and were very much interested in our work and were impressed by crop prospects here. One farmer from Oklahoma visited the station Friday.

Maximum temperature 88; minimum 40; precipitation 0.

BIG SPRING:

Unusually warm weather for this time of the year has prevailed during the past week. This has caused cotton to open very rapidly and in all probability will help shorten the picking season considerably. There was little or no top crop put on this fall, so there will be a small per cent of late maturing bolls.

In accordance with the regulations of the Federal Horticultural Board for regulated zones, the seed from all cotton produced in this county is being sterilized before it leaves the gin and every bale of lint is being fumigated with hydrocyanic gas at the compress. These control measures are being taken to destroy any pink boll worm larvae which may have hibernated in the seed cotton.

Station work during the past week has consisted mainly of picking cotton and digging and stacking peanuts. A field of sumac was cut and shocked and an increase block of Reeds kafir was headed.

Maximum temperature 100; minimum 57; precipitation .09 inch.

TUCUMCARI:

Crops have matured, fired, or lodged rapidly the past week, necessitating harvesting with as little delay as possible. A portion of the early cotton plots were picked; cowpea and bean seed was threshed and cleaned; all increase broadcast sorgo was cut and shocked; the remainder of variety corn plots and early plots devoted to corn borer studies were harvested; all remaining plots in sorgo variety test were cut, weighed green, and shocked, due to excessive firing; and heading of north field milo plots has continued.

TUCUMCARI, continued:

Ripening of crops has been unusually uniform, due to the drought, so late plots are ready for harvest soon after early dates are completed. By the close of next week practically all crops, with the exception of a few late cooperative grain sorghum varieties, should be harvested. Practically all cotton is ready for first picking.

Messrs. Wagner and De Allamand, of Garden City, Kansas, visited the Station Wednesday, while State Game Warden Perry, Game Commissioner Losey, and several members of their force were here Tuesday.

Maximum temperature 95; minimum 45; precipitation .01 inch. Precipitation since September 1, .13 inch. Precipitation October 1, 1927 -- October 6, 1928, 12.00 inches.

LAWTON:

The drought which began the latter part of July remains unbroken. Occasional threats of rain appear but usually result only in a change of wind direction. Brisk, southwest winds prevail during the day time but are frequently retarded in velocity at night fall. Daylight temperatures, on the whole, are consistently high. September precipitation consisted of four showers amounting to .66 inch. The deficiency in precipitation from July 1 to October 1 amounts to 5.25 inches. A month has now passed since even a trace of rainfall has been recorded.

Nearly all farmers who have seed beds that are at all in suitable condition are seeding small grains in dry dirt. Seedings of winter barley on the station since September 15 remain ungerminated.

The second picking of cotton was completed September 29. Threshing of practically all sorghum crops was completed during the past week and the stover on all plots that were headed in the field was weighed and stacked.

Maximum temperature 100; minimum 53.

WOODWARD:

Farmers in this section are becoming nervous, and many continue to "dust" their wheat into ground as drought which started in June continues unbroken.

Work of the week on the Station has consisted of harvesting sorghums and cotton and watering shrubbery. Sorghum harvest should be almost completed by the end of next week, and threshing can begin immediately if dry weather continues.

Maximum temperature 98; minimum 44; precipitation 0.
Wind velocity 7.3 miles per hour; evaporation .731 inch.

96

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

OCT 13 1928

REPORT FOR WEEK ENDING OCTOBER 13, 1928.

JUDITH BASIN:

The total precipitation during the month of September amounted to .41 inch, while the normal precipitation for September is 1.64 inches. The first snow storm of the year occurred on October 10. The total preciptation in this storm was .42 inch.

Practically all the grain in the Basin is harvested. The fall up to this week has been one of the most favorable. There was a noticeable reduction of the amount of winter wheat seeded, due to unfavorable returns from this crop during the 1928 season. The majority of those who have seeded have been more conservative in their dates of seeding. Better summer tillage methods have also been practised. There are also various types of big scale tillage implements in use which resulted in some poor fallow preparation. These methods are under test in the increase fields at the station.

Maximum temperature 77; minimum 11; precipitation .42 inch.

HUNTLEY:

Field work during the first two days of the week consisted of harvesting potatoes and garden crops. On Wednesday a gentle rain started falling and continued as rain and snow for about 48 hours. The total precipitation received amounted to 1.03 inches. This should serve to germinate winter wheat which has, in many cases, lain in dry seed beds since August, and has caused farmers no little concern.

Winter wheat on the fallow plots and in the variety test strips, also fallow, has come up to fairly good stands, but the wheat on other methods of seed bed preparation is not yet up.

Maximum temperature 80; minimum 25; precipitation 1.03 inches.

SHERIDAN:

Husking of corn was completed the 10th. Light rain began to fall the same afternoon, changing to snow during the night and continuing throughout the next day, with some rain since. All of the corn and late forage crops still remain to be weighed. Fall plowing of the rotations was completed the 9th, but the listing still remains to be done.

Maximum temperature 85; minimum 26; precipitation 1.07 inches.(about .80 inch in the form of snow, which is mostly melted now).

MANDAN:

Agronomy

Corn varieties were husked during the week. It is now very well dried out and is in good shape for husking.

Weather turned much colder on the 11th and the 12th, but the sun is shining and it is warmer today.

Maximum temperature 76; minimum 27; precipitation Trace.

Cooperative Grazing Experiment

The grazing experiment will close at the end of this week. Final weighings are being made. The weather was very good during the first 10 days of the month. The cold spell on the 11th and 12th made the cattle shrink, so they will show very light gains or losses for the month.

Horticulture

The acre garden has been manured and plowing is now in progress in the acre garden and vegetable breeding plots.

Nursery stock has been dug and heeled-in for the winter. All fruit stock to be sent to horticultural cooperators has been fumigated and stored in the root cellar for the winter.

Arboriculture

Digging of nursery stock was continued this week. Boxelder remains to be dug. The stand of most species is very heavy and good growth has been made. Fumigation is proceeding today and will be continued the early part of next week.

ARDMORE:

The weather has varied from hot and dry during the fore part to cold and damp during the latter part of the week. A trace of moisture in the form of fine snow or mist fell on Friday and Saturday.

All fields and rotation fields of sorgo were hauled in and stacked. The yield was approximately two tons per acre, field cured basis.

ARDMORE, continued:

Mr. W. H. Black, Animal Husbandman in Charge of Beef Cattle Investigations, was a station visitor on Thursday.

Maximum temperature 86; minimum 27; precipitation Trace.

ARCHER:

During the first half of the week the weather was warm, clear and dry. On October 9 the temperature reached a maximum of 81 degrees. During October 11 a change took place and since then the weather has been cool and foggy with mist at times. This gave everything a coat of ice.

Until the bad weather came on work at the station consisted of snapping corn and digging potatoes. Since then the men have been hauling manure, grinding feed and working about the yards.

Maximum temperature 81; minimum 28; precipitation 0.05 inch.

AKRON:

The later part of the week witnessed cloudy and foggy weather with a light showing of precipitation. However, the total precipitation was only .15 of an inch where the needs were for an inch at least.

The harvesting of the sorghum varieties in the general forage variety experiment was completed near the middle of the week. This completes all the harvesting for the current season. The threshing of the bean variety experiment was continued. Three acres of Hog millet grown on land across the railroad was threshed this week-end. The grain yield was very disappointing, running only about three bushels to the acre, whereas the straw yield was fully average.

Mr. E. J. Maynard and Mr. Grant Eddy, from the Agricultural College, visited the station Friday in the interest of live stock experiments.

Maximum temperature 88; minimum 32; precipitation .15 inch.

GARDEN CITY:

A rain measuring .35 of an inch was recorded yesterday morning and .60 of an inch was recorded this morning. It is still raining. This is the first moisture of any consequence to be received since August 5. This moisture should connect up with the subsoil moisture on most of the wheat seedbed. Seeding can safely be done now as soon as the surface is dry enough to permit drilling.

Dawn kafir, sumac and a few plots of milo and feterita are still standing on the project. The rain just received was accompanied with a marked drop in temperature although no frost has been recorded. A killing frost would necessitate the cutting of all standing crops at once.

Dr. A. M. Brunson and Mr. Carl Bowers, of the Cereal Office, were station visitors Thursday.

Maximum temperature 91; minimum 38; precipitation .95 inch.

DALHART:

Local conditions are more favorable here at this time than they have been for some time. The weather has been favorable for field work until today. Four rains have been recorded to date this week, bringing the total to 2.00 inches. This is exceptionally good for October. This will make the surface moisture meet with the moisture below. The rains started with .03 inch Wednesday, .24 inch Thursday and 1.47 inches Friday night. Up to this time Saturday .26 inch has been recorded since the morning reading. Only one day was lost from field work due to rain.

Harvesting has been in full swing all week. By noon Friday the grain baskets had all been filled. No time was lost from the rain Thursday night. With all available baskets full at noon Friday, it remained to either thresh some to get more baskets or make more. The rain solved the problem. More baskets were made Friday afternoon and today. By quitting time this evening we will have approximately 46 baskets. This will about finish the year's harvest. Nearly all the rotations are harvested at this time. The few remaining plots are not ready yet. There are a number of plots in the varieties and dates which are ready and will be harvested as soon as possible.

The prospects for yield are not so favorable as at September 1, due to the long dry spell during the time the grain was filling. In spite of the prevailing conditions, the yield will go above the average. A few plots will yield high.

DALHART, continued:

Some of the cotton is now ready to pick, and will be taken care of as soon as possible. Today was scheduled for the first picking but the rain made this impossible. Most of the cotton is opening up in good shape this fall and earlier than usual.

This rain will be fine for the winter wheat and rye. Some had already germinated before the rain. The farmers will go ahead now and plant wheat as rapidly as possible. Many were holding off until it rained.

Maximum temperature 91; minimum 47; precipitation 2.00 inches.

TUCUMCARI:

A rain of .51 inch Thursday night, and one of .40 inch last night delayed harvest, but should result in germination of wheat seeded in dry fields and enable farmers to seed their remaining acreage.

The past week's work has included pulling and seeding an increase plot of Scarborough broomcorn, completion of cutting and shocking increase broadcast sorgo, heading of a large number of grain sorghum plots, digging a portion of the peanut variety plots, and cotton picking. Cotton is opening unusually early and some varieties are producing at the rate of 1/3 bale per acre, first picking.

Weighing and sorting of broomcorn was done this week. The heaviest yielding plot was Scarborough, six inch space, June 15th date, 600# good brush per acre. The average of all varieties, all dates, on both spacings, will be something over 400# good brush.

Maximum temperature 94;minimum 51; precipitation .91 inch.

BIG SPRING:

Dry, warm, weather has prevailed again this week; this has allowed cotton picking to progress just as rapidly as the limited picking force of the county would permit. A very high grade sample is being obtained this year as no stained or dirty cotton has been delivered at the gins up to date.

BIG SPRING, continued:

Station work for the week has consisted mainly of picking cotton and h ading milo in the rotations and in the increase fields. Heading of plots in the rotations was completed and most the stalks were cut and shocked. Several late date of seeding plots of sorghums were also harvested.

Maximum temperature 94; minimum 63; precipitation 0.

LAWTON:

Drought and record breaking maximum temperatures for October continue. A few clouds appear occasionally and the wind blows steadily from the southwest and the southeast.

Seeding of small grains, except a few late dates of barley, was done during the week. All seed beds are dry and the grain lies in the dust. This condition exists generally throughout the western end of the State. A considerable acreage remains unplanted because the soil is too lumpy and hard to make the use of the drill possible.

Cotton picking on the station is about completed. In the surrounding territory the crop is rapidly being picked and ginned.

Maximum temperature 95; minimum 61.

WOODWARD:

Work of the week has consisted of harvesting sorghums and picking cotton.

Rainfall totaling 1.40 inches, coming on the 12th and 13th has broken the drought of 3½ months, and created very fine conditions for the planting of winter wheat.

Maximum temperature 96; minimum 47; precipitation 1.40 inches.
Wind velocity 8.8 miles per hour.

DICKINSON:

A light snow which fell on the 11th was the first of the season. Temperatures remained mild and the snow interfered with outside work only a short time.

Most of the time was spent in finishing up the field work on potatoes and root crops.

Yields of all root crops were good due, in part, to better stands than are usually obtained. Mangels yielded better than other types of roots, the Danish Sludstrup variety making about 33 tons an acre.

The garden was manured and plowed.

Three hundred pounds of ash seed were sent to the Northern Great Plains Field Station, Mandan, North Dakota.

Maximum temperature 81; minimum 24; precipitation .13 inch.

.9
596

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

OCT 20 1928

REPORT FOR WEEK ENDING OCTOBER 20, 1928.

MANDAN:

Agronomy

No field work was done during the week except to husk a few corn plots. The weather was favorable for the most part of the week.

Maximum temperature 68; minimum 28; precipitation .15 inch.

Cooperative Grazing Experiment

The grazing experiment was completed for the season on October 13, or at the end of 150 days.

The final weighing days were rather cold, and the cattle showed a loss for the last 15 days on pasture. The cattle would, no doubt, have shown a gain for the period, if the weather had remained good.

The final 15-day period gains or losses, and the seasonal gains, are shown in the following table. The 50-acre steers did not have their pasture grazed as closely at the end of the season as usual. During the last month the brome-grass steers had access to 15 acres of native pasture in addition to the brome-grass. The fact that they show a gain for the final period is no doubt because they had some brome-grass available in addition to good native pasture. The rotation steers had plenty of feed available at the close of the season. There was also ample feed in the other pastures.

Pasture (acres)	No. Steers	Gain or loss in pounds per head		
		October, 15 days	Season	Days
100	10	-6	291.0	150
70	10	-10	298.0	150
50	10	-28	249.0	150
30	10	..	170.0	135
Rot. (70)	14	-16.4	258.9	150
Brome (25)	8	..	275.8	120
Brome and Native(40)	8	11.9*	331.9	150
Sweet clover (10)	5**	..	286.0	120

* 58.1 pounds per head during 30 days.

** 11 head were on the pasture for 45 days. This is for the original 5-head for the season of pasture.

MANDAN, continued:

Cooperative Grazing Experiment, continued.

The 30-acre steers showed a gain of 25 pounds per head during the final 15 days on reserve pasture. This nearly offset their loss of 32.5 pounds per head during September. The sweet clover steers gained 30 pounds per head during 30 days on reserve pasture.

Horticulture

All stock in nursery and seedbeds has been dug and heeled-in for the winter. Raspberries, grapes and nursery stock budded last August, have been covered with soil for winter protection. Plum and apple seeds have been washed out and are now ready to plant.

Horticultural shrubs and trees are entering the winter with the soil much dryer than one would wish. It should be a good year to determine the effect of late fall watering, and half of the sapa plums in the pruning experiment are being watered.

Arboriculture

Digging of the shelterbelt nursery stock is well along. This year we have exceptionally heavy yields of green ash and Caragana. On account of the dry spring weather, the number of Russian olive and Boxelder is comparatively small. A shipment of 300 pounds of Ash seed was received from the Dickinson station. The seed crop at that point was much better than here at Mandan.

ARDMORE:

The weather was cold and stormy during the first portion of the week, and warm and fair during the latter portion.

The dam in the beef cattle reserve pasture was repaired in order to store any water that may accumulate from winter snows. At present, the water supply is very low in this pasture and it is believed that the dam will furnish an ample supply.

Other field work consisted of husking corn in the field and manuring the garden.

ARDMORE, continued:

The summer grazing experiments with beef cattle on native pasture were concluded on the 18th. The animals were weighed on three consecutive days and the averages taken as the final weight. The gains for the period were as follows:

80 acre pasture (on 320 acre reserve pasture)	36.5 lbs.
160 acre rotation pasture	-22.5 "
150 acre pasture	-23.0 "
320 acre reserve pasture	26.7 "

The gains for the season, 150 days, were as follows:

80 acre pasture (115 days)	96.5 lbs.
160 acre rotation pasture	134.4 "
150 acre pasture	168.0 "
320 acre reserve pasture	256.7 "

Maximum temperature 73; minimum 24; precipitation .20 inch.

ARCHER:

The fore part of the week was a continuation of the cool, misty weather of the previous week. However, on October 19 a shower of .23 of an inch of precipitation occurred. This, with the other precipitation before and after, made a total of .43 of an inch for the storm period. The last half of the week permitted field work.

During the fore part of the week the work consisted of hauling soil from the dipping vat pit and hauling gravel on the roads. Later the potatoes were dug and the last of the corn was snapped.

Winter cereals will be greatly benefited by the precipitation which occurred during the storm period. Winter wheat on fallow had emerged very indifferently and that seeded on stubble land had made no growth as the seed was in dry soil.

Mr. J. M. Stephens and Mr. J. F. Brandon, of the Dry-Land Office, and Prof. Maynard, of the Colorado Agricultural College, were station visitors October 19.

Maximum temperature 65; minimum 28; precipitation 0.38 inch.

AKRON:

The storm reported last week-end continued until well towards the middle of the past week with additional moisture which totalled 1.06 inches for the period. The heaviest single rain occurred Sunday evening the 14th during an electrical display when .55 of an inch was recorded. The weather gauge at Otis, approximately 8 miles east, reported better than an inch of precipitation from the same shower. In a trip to Fort Collins this week-end, it was observed that the recent rains have been very general so that it is stated that the prolonged drought over the plains of northeast Colorado have been effectively broken.

The October 15th rate and date seeding of Kanred winter wheat was delayed until the 17th on account of wet soil. Some Rosen rye was increased on sweet corn ground on low ground at the extreme north end of Series 8, Main Field, during the week.

There are now promises of emerged stands of winter wheat and rye on all the experimental projects if only a certain amount of warm weather is experienced before deep winter. Examination revealed the top seven to eight inches of dry soil on the fallowed land amply wetted. Fallowed land this year contains from 5 to 6 feet of well wetted soil, but the surface several inches became entirely too dry during the prolonged drought for emergence even when seeded with the furrow drill.

Work during the week consisted largely of rustling ewes and lambs into winter feeding lots and into fall breeding lots, and the construction of additional feed troughs and racks necessary.

Maximum temperature 70; minimum 31; precipitation .91 inch.

HAYS:

The recent drought was broken by a good rain of 1.02 inches which fell October 12, 13, and 14. These rainy days were followed by a few cloudy, damp days which made the rain all the more effective, with the result that the whole farm landscape has been changed from one of universally spotted wheat fields to full stands of wheat on most every field. The wheat is not yet large enough to make the fields very green, but upon close inspection a good stand can easily be seen.

HAYS, continued:

The lowest temperature recorded thus far during the fall is 32 on October 19. However, even with this temperature no frost was observed in this locality, but for some time many trees have been shedding leaves and the pastures have been taking on the appearance of fall. This has been due largely to drought and cool weather instead of frost.

GARDEN CITY:

With no killing frost and with fairly high daily temperatures during the past week, late planted row crops matured to quite an extent. Temperatures during the week reminded one of those recorded about the middle of September. Many fields that looked hopeless early in September now look like a fair crop would be harvested.

The rains of last week put most of the wheat seedbed in good condition for planting. All winter wheat plots on the project were seeded Wednesday. There is moisture enough in the surface soil to cause germination In taking soil samples on the continuous cropping series of winter wheat it was found that the soil was moist to a depth of only ten inches on late fall plowed ground, to a depth of about three and one-half feet on early fall plowed land, and to a depth of six feet on land that was summer fallowed.

In the date of planting test none of the wheat crop has emerged even though some of it was seeded as early as August 20. No doubt, the early planted plots will emerge about the same time the late planted ones do.

All of the sorghum and corn plots are now harvested with the exception of dawn kafir and two plots each of sumac sorgo and broomcorn.

Maximum temperature 74; minimum 34; precipitation 0.

DALHART:

Late rains have apparently ceased and field operations are in progress again. The fields were too wet to enter until Thursday of this week. The rains recorded her were during the fore part of the week and were light, .45 inch and .30 inch respectively. Rains farther north and west were very heavy. On Sunday night at about 7:30 a wall of water came down the canyon, reaching at its peak, the highest level since the dam went out several years ago.

DALHART, continued;

Tourists were parked on both sides waiting for three days to cross.

By Thursday the fields had dried off so that heading could be resumed. All the rotations and varieties are headed that we had baskets for. The additional baskets made up last week are filled and we will have to thresh some to get more or, in case it should frost before the grain will do to thresh, we will bind the remainder. The headed plots are bound and in the shock. A few plots are not ripe enough to head at this time, but are ripening rapidly. These will be left until mature, or until killed by frost.

Frost was seen on two mornings this week on the ground, mostly on dead leaves, etc., but the temperature was not sufficient to kill the most tender plants. Heavy dews have been present each morning.

The small grains are germinating in good shape at this time. However, nothing can be determined as to the stand. These plots will be fenced against rabbits as soon as possible.

It has been too wet to do any cotton picking all week. This will have to wait until the mud is gone as the pickers will have to get down on their knees to get the cotton, it is so low. It is opening up in good shape so that the first picking will get a larger per cent of it. Heretofore, it has been necessary to make several pickings, when cotton was produced. From reports down state the cotton is poor. This will serve as an indication that the seed we use for next year should be saved here, rather than depend on having some shipped in.

Maximum temperature 73; minimum 36; precipitation .75 inch.

TUCUMCARI:

Precipitation of 1.30 inches early in the week made the total for October to date 2.23 inches. Wheat seeded a month ago is emerging to a good stand, while many farmers have completed seeding since the rains.

Harvesting has progressed well since it has been possible to get in the fields. The first picking of cotton was completed; the remainder of rotation kafir plots were headed and stalks cut; the M. C. sorgo was cut; a number of late grain sorghum plots were headed and cut; and considerable increase milo has been headed, and increase sorgo cut and shocked.

TUCUMCARI, continued:

Crops now standing consist of increase Dwarf hegari which will be headed; increase Dawn kafir to be headed for seed; 50 rows single row sorghum nursery, and about 30 plots of grain sorghum in date-variety test which it is hoped will fully mature so they can be headed in baskets before cutting of stalks. Should frost occur soon, these plots will be cut without heading, for grain on practically all of them is sufficiently mature to mature fully in the shock.

Maximum temperature 78; minimum 37; wind velocity 4.6 miles per hour.

BIG SPRING:

A dry norther, the first one of the season, hit this section of the country this week; this has caused cotton to open very fast. As a result, picking is under full swing and the gins are running night and day. Judging from the appearance of the fields now, it would seem that this county will make considerably more cotton this year than was generally anticipated two months ago.

The last of the late maturing varieties of peanuts were dug and stacked this week. Some of the late dates of sorghums were also cut. With the exception of the July 15 date of planting, all grain sorghum plots have been harvested. Other work has consisted mainly of picking cotton and heading milo in an increase field.

Maximum temperature 86; minimum 39; precipitation 0.

WOODWARD:

Work of the week has been chiefly devoted to planting wheat and harvesting sorghums and cotton. Over the whole territory adjacent to Woodward every farmer is busy planting wheat.

Maximum temperature 81; minimum 41; precipitation .10 inch.
Wind velocity 6.4 miles per hour.

SHERIDAN:

The week was mostly fair. The fall listing was done and corn dried out sufficiently to sack and get under shelter for further drying and weighing. Sudan grass also was hauled and weighed. None of the other forage dried sufficiently to weigh.

Some fall wheat is being seeded in this locality since the precipitation of last week. Considerable fall plowing is also being done.

Maximum temperature 72; minimum 29; precipitation .32 inch.

7
96

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

OCT 27 1926

REPORT FOR WEEK ENDING OCTOBER 27, 1928.

HUNTLEY:

A second rain and snow storm early in the week stopped field work until the last day or so. As a result, little has been accomplished during the past week in the way of cleaning up the fields for the winter. Root crops in the Dry-Land garden were dug, plot stakes were stored, and some corn was husked in the miscellaneous experiments.

Fall sown grains that have come up are making a good growth, but the stands on preparation methods other than fallow are yet too thin to be recorded as final for the fall emergence. Investigation of the seed still in the ground shows a fair percentage to be germinated, and with favorable weather for a few days these seedlings should soon be through the ground.

Maximum temperature 66; minimum 28; precipitation .61 inch.

SHERIDAN:

Snow which occurred the evening of the 20th prevented any further work with forage crops until the 26th. The corn stover and sorgo from the rotations were hauled yesterday and today, October 26 and 27. The week was occupied principally in miscellaneous work about the station. Pigs for feeding were hauled, the pens repaired, and some plowing was done.

Maximum temperature 67; minimum 23; precipitation .53 inch.

MANDAN:

Agronomy

Weather favorable to field work prevailed throughout the week. Light frosts occurred during the latter part. Moderately high winds continued most of the week.

Corn shredding was started Monday and was finished Friday. The conditions were good. With very little rain since harvest, and clear warm days, the corn has cured exceptionally well. Although tests for moisture have not been completed, it is estimated that the amount of correction to air-dry weights will be small. The average yield of ear corn from 51 plots in the Main field, based on 80 pounds to the bushel, is 40 bushels. The highest yield, using the same bushel weight, is 57.5 bushels. This was on spring plowed oats that was manured last year. The lowest yield, 24.9 bushels, was on continuous listed. On the whole, the quality of the corn is very satisfactory.

MANDAN, continued;

Agronomy, continued.

The stalks and leaves were green at harvest, which assures a high grade stover, and ripening was so well finished that the frost hazard to seed was very much reduced. The completion of shredding ends the field work for the year 1928.

Maximum temperature 61; minimum 20; precipitation 0.

Cooperative Grazing Experiment

According to present plans, the steers in this experiment will be shipped October 31.

Arboriculture

With the exception of a small amount of Russian olive, all of the shelterbelt nursery stock has now been dug, fumigated and heeled-in. The collection of boxelder seed now in progress, and the making of poplar cuttings, will complete the outside fall work. Three hundred pounds of ash seed have been received from the Dickinson Sub-Station.

Prof. E. C. Chilcott, and Mr. M. A. McCall were visitors during the week.

ARDMORE:

The weather during the week was fair and warm with one period of precipitation.

Field work consisted of husking corn and hauling gravel.

Thirty-six head of steers were received from Omaha Friday. They were less uniform in size and of poorer quality than those received last year.

Maximum temperature 66; minimum 21; precipitation .05 inch.

ARCHER:

The weatherhas been mild and dry with the exception of a light thunder shower of .02 of an inch of precipitation the afternoon of October 25.

Work at the station has consisted of doing the fall plowing on the Dry-Land plots and seeding 17 acres of winter wheat and 10 acres of winter rye. Considerable manure has been hauled. Today the dairy herd is being dipped.

Winter wheat is about to emerge. Most of that which emerged earlier in the season has been killed either by grasshoppers or rabbits.

Maximum temperature 66; minimum 25; precipitation .02 inch.

GARDEN CITY:

The first killing frost of the season was recorded the night of the 21st. when the temperature dropped to 26 degrees. This frost was two weeks later than the average first killing frost.

It was necessary to cut all standing crops. Most of the row crop was far enough advanced to maturity so that the low temperature did little or no damage. Some of the varieties in the last date of planting were immature. Everything on the dry land project is now in the shock.

Winter wheat that was seeded about ten days ago is just beginning to show through the soil. All plots that were in wheat last season are showing an excellent stand of volunteer. This is especially true of plots where the seedbed was prepared by listing. There was not enough moisture to cause this volunteer to emerge before seeding time, so, as a result, some plots will have at least twice as many plants on them as is necessary.

Director L. E. Call was a station visitor Wednesday.

Maximum temperature 74; minimum 26; precipitation 0.

DALHART:

Favorable operating conditions have prevailed over the entire week. The daily temperatures have ranged in the 60's and 70's. One light frost was recorded on the morning of the 22nd, but nothing was damaged except the most tender plants.

DALHART, continued:

This frost did not kill any of the field crops, neither did it kill the leaves on trees.

Harvesting has been in progress all week. All of the cotton which was open was harvested early in the week. The remainder of the time has been spent in heading and binding plots. A check-up showed that in order to head the remaining plots would require at least 100 more baskets. This being out of the question, the remaining plots are under process of binding. The grain will be left on the stalks until the headed plots are threshed, then these will be taken care of. A few plots are being left in order to fully mature, or until killed by frost. Today will finish the harvest of all the experimental plot work with sorghums excepting three plots which are not mature. There is a lot of field harvesting to be done as soon as the plot work is out of the way.

The small grain plots were all harrowed this week in order to break the crust formed after the heavy rains. The small grains are coming up in good shape. A good stand of winter wheat is up already. Barley was drilled in the vineyard, orchard and tree plantings for wind-break this week.

Maximum temperature 70; minimum 30; precipitation 0.
Very little wind all week.

TUCUMCARI:

Weather conditions have been favorable for completion of harvesting the past week. Binding is completed, although a few late date plots remain to be headed after sucker heads fully mature. Harvesting of peanuts is completed, and the second picking of cotton under way. Frost has not occurred, 34 being the lowest temperature recorded.

Considerable time the past week has been devoted to miscellaneous fall protection work, such as painting some 300 Chinese elms to prevent rabbit damage, fencing a small elm nursery against the same pest, and placing poultry netting cylinders around grapes and trees. Field rodents are unusually numerous and during the week all baskets filled with heads were moved and poison grain scattered near them and along roads. Trapping of gophers is proving successful, several being removed from the traps each morning.

It is probable that threshing of heads from baskets can be begun within a week.

Maximum temperature 79; minimum 34; precipitation .01 inch.

BIG SPRING:

Ideal harvesting weather has prevailed during the past week with the result that cotton picking has gone forward without delay. A very good grade is being obtained this fall as the lint contains very little trash and has little or no discoloration.

Station work has consisted mainly of heading an increase field of milo and picking cotton. Some of the cotton varieties have been picked over four times and most of them three. There will probably be another picking on most of the plots.

Maximum temperature 80; minimum 37; precipitation 0.

LAWTON:

Farm work has progressed in a more or less routine manner for the past two weeks without any interruption or breaks in the weather. Temperatures have been somewhat lower than during the first half of the month but the monotony of drought continues, producing considerable depression in farm circles. On October 20 a shower of .14 inch was recorded on the station. Several places in the county reported from one-half to three-quarters of an inch. These larger amounts will result in considerable germination of small grain but will not provide for any continued growth unless more moisture falls in the near future. A good many small grain growers are watching this condition with considerable anxiety.

Cotton picking on the station has been completed. Because of the heavy infestation of weevil existing in the late immatured bolls, the plants have been mowed, hauled off and burned. From one to three weevil or grubs were present in practically every immature boll. This condition has been general throughout this part of the state practically all fall.

The first frost of the season was recorded October 23, but it was not heavy enough to be injurious.

Maximum temperature 84; minimum 35.

WOODWARD:

Work of the week consisted of planting odd patches to winter wheat to prevent blowing, and of cleaning up odds and ends of harvesting on the sorghums. Heads from all grain sorghum plots were hauled into the shed and will be threshed next week. Stacking of heads from all increase fields was also accomplished.

Planting of winter wheat is still going ahead among the farmers over adjacent country, although surface soil is becoming too dry to insure a stand. Much wheat is up to an excellent stand.

Congressman Garber and Assistant Secretary Dunlap were visitors during the week.

Maximum temperature 80; minimum 34; precipitation 0.
Wind velocity 7.3 miles per hour.

Note: The following memorandum was received from Dr. W. A. Taylor, under date of November 1, 1928.

"MEMORANDUM FOR HEADS OF OFFICES

Gentlemen:

With a view to a close coordination of the horticultural activities of the Bureau of Plant Industry, the offices of Crop Physiology and Breeding, Fruit Diseases, Vegetable and Forage Diseases, except the cotton and forage disease work, the Pathological Laboratory, except the photographic unit and work on tobacco diseases, and the physiological section of Plant Geography and Physiology, are hereby consolidated with the Office of Horticulture, the consolidated unit to be designated as the Office of Horticultural Crops and Diseases. The forage disease work is transferred to the Office of Forage Crops, the cotton disease work to the Office of Cotton, Rubber and Other Tropical Plants, the photographic unit of the Pathological Laboratory to Mycology and Disease Survey, and the work on tobacco diseases to Tobacco and Plant Nutrition.

Dr. Eugene C. Auchter, head of horticulture at the University of Maryland, has been appointed as Principal Horticulturist in Charge of the Office of Horticultural Crops and Diseases, effective November 16, 1928. He will assume administrative supervision and direction of the scientific and related work of the consolidated unit. I bespeak for him your hearty cooperation."